



**HealthPartner 360 (“HealthPartner”)** is a comprehensive medication management system for individual Patients and their networked support partners. HealthPartner 360 will be commercialized in three phases.

HealthPartner’s networked system’s business plan sequentially adds capabilities and grows revenue by adding target markets over time.

*“ It was an excruciating experience to have our elderly parents living in New Jersey while we resided in CT. We could never get a clear picture if they had or had not taken their critical medications. This filled our phone conversations with tense exchanges. We constantly wondered if we were doing enough for them. They did not want to leave their home. There is a better way.”*

*Mark Noonan, Founder, Nootools Health llc*

## Team

### **Mark Noonan**

CEO & Co-Founder

Lead product  
Design/Manager

- Over dozen, lean product launches(over 20 patents)
- Extensive early-stage product/business management
- Strong consumer-focused product solutions

### **James Solberg**

COO & Co-Founder

Strategic Planning,  
Finance, Operations

- Over 3 decades at Salomon Smith Barney/Citigroup
- Healthcare Investment Banker and Capital Markets
- Managing Partner - Stirling Bridge Strategies

### **Ali Raza**

Lead Hardware Developer

- Extensive background in embedded systems design and product development.
- Electronics engineer and Master's degree in AI/Robotics

### **Martin Scheidl**

Lead Web/App/Database  
Manager

- 20+ years experience in systems development &strategic analysis for pharmaceutical trials & consumer product companies
- Previously CIO of a multinational Orient Express Hotels

### **John Crowley, Phd**

Coordination of cross-platform  
integration for firmware and  
software applications

- Founder of multiple successful startups.
- Managed development teams - up to 60 professionals
- Over 2M lines of code in multiple languages

### **Prof. Douglas Lyon**

Advisory Board Member

Technology, Innovation and  
Research

- Fairfield University Director Electrical and Computer Engineering Dept.
- Founder and President of tech development firm DoJava, Inc.,

### **Dr. Erkan Hassan**

Advisory Board Member

Pharmacology/Healthcare &  
Clinical Technology Adoption

- Extensive experience developing innovative solutions to improve clinical outcomes
- Implemented innovative clinical transformation programs

# Healthcare Trends And Medication Management

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HealthPartner 360's strategy  
is **aligned** with today's  
**important healthcare trends**

Keeping patients in the home for  
as long as possible for lower cost  
and higher quality of life

Increasing use of complex  
protocols or care-critical  
prescriptions

Analyzing data to improve  
outcomes

Lowering healthcare cost

Supporting telemedicine

# Non-Adherence Offers a Very Large Target Market

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## THE COST IS VERY HIGH:

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- Non-adherence to prescribed medicine protocols is a widespread problem, *especially among certain Patient groups*
- Non-adherence is dangerous for the patient and costly for the entire healthcare system
- In clinical drug trials (**CRO-run**) non-adherence raises costs and delays market introduction
- Deferring institutional care is important for quality of life and cost reasons - and enabled by HealthPartner technology

- Non-adherence costs the Healthcare system over **\$500 billion annually\***
- Patient Adherence Rate is **only 50%**

### Clinical trials:

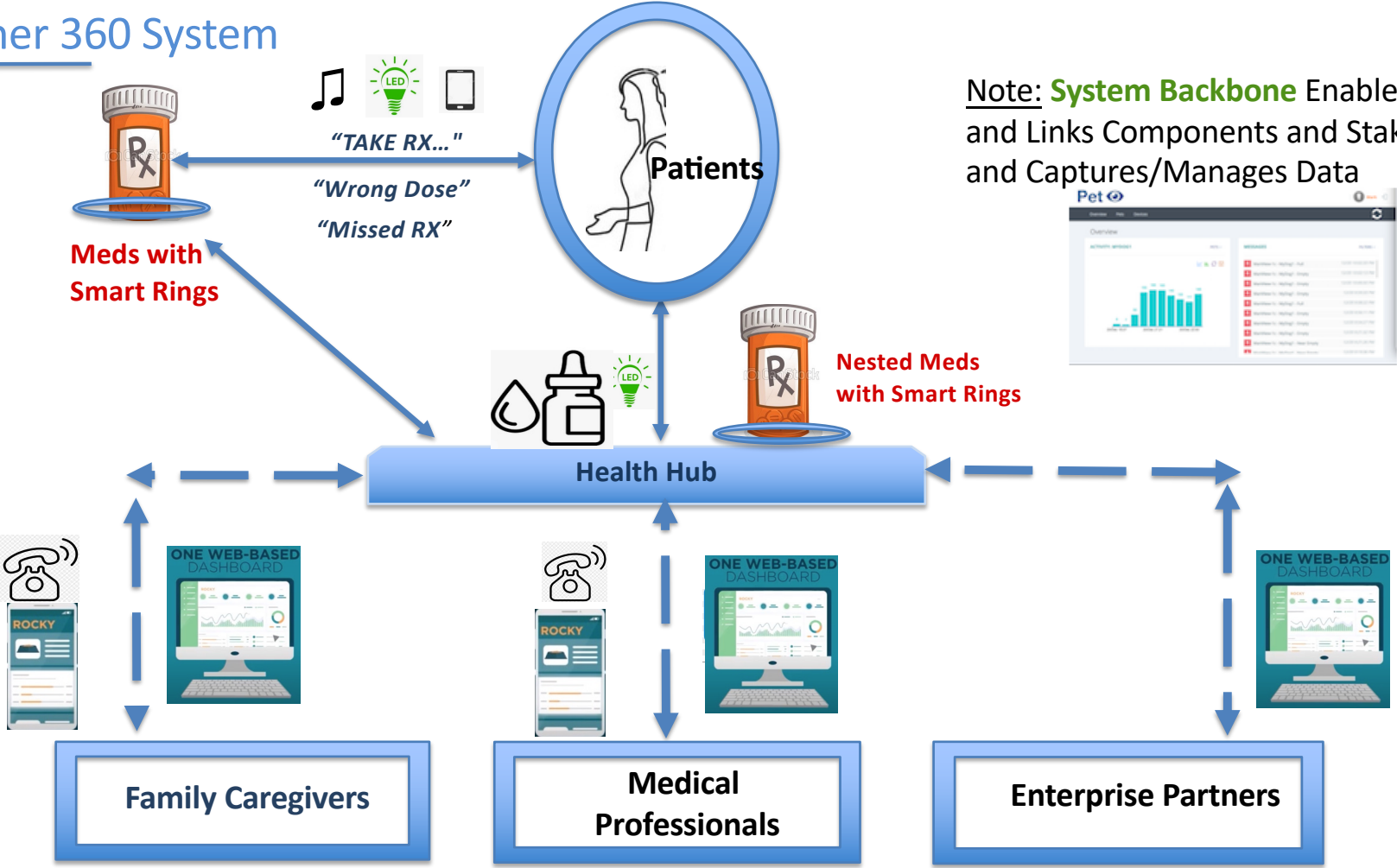
- 40% of patients become non-compliant by the 150th Day
- Each 1% reduction in patient non-adherence eliminates \$570,000 in clinical drug trial costs (across 4 phases)

### In-Home Nursing Care:

- The 14 million patients receiving is projected to more than double by 2040 (AARP)
- – **leading to anticipated caregiver shortages**

\* Annals of Pharmacotherapy 2018

# Simplified Schematic HealthPartner 360 System



Note: **System Backbone** Enables and Links Components and Stakeholders and Captures/Manages Data

## HealthPartner 360 Solves the Problem For *At-Risk Patient Groups*



- Patients that desire to remain at home with or without in-home nursing support with improved costs/quality of life
- Elderly Patients without local family support and the challenges of adult children providing remote support
- Complex household environments (e.g., those with aged couples, multiple children on meds, etc.)
- Patients that are forgetful or cognitively impaired
- Patients that take critical-care drugs or multiple medicines
- Including patients supported by in-home, visiting nurse services or participating in clinical drug trials

# Stakeholders

*HealthPartner Stakeholders play critical roles in reducing non-adherence:*

- **Family Caregivers:** Relatives - Remote or In-home
- **Medical Professionals:**
  - Home Health Nurses and Staff
  - In-office Nurses and Doctors
- **Enterprise Partners:**
  - CROs (Contract Research Organizations)
  - Home Health Service Companies
  - Pharmacies
  - Insurance Companies
  - Physician Practices, Surgery Centers, etc.
  - Government and Not-for-Profit (CMS, Federal and Health Agencies, Disease Related Associations)



# HealthPartner 360 Business Plan –Three Phases

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## ➤ Phase I\* - Core HealthPartner Medication Adherence System (2 Years)

- *Nootools Health (the “Company”) is seeking \$1.7 million to fund additional development and two beta tests prior to commercialization of HealthPartner*
- Comprehensive Patient Adherence System
- Connectivity with Caregivers
- Product/Patient Level Risk Management
- Selected Beta Tests and Target Markets: CROs and In-Home Nursing

## ➤ Phase II - HealthPartner Medicine Management Network (3-5 Years)

- Connect to Medical Professionals and Enable Telemedicine
- Data Capture and Analysis for Enterprise Partners in Network
- Integrated Risk Management
- Prioritized Expansion of Target Markets (e.g., senior living and care facilities, disease specific marketing, geriatric physicians, etc.)

## ➤ Phase III - Mass Market Product (5+ Years)

- Lower Cost
- Evolved Technology

\*The balance of this presentation focuses on Phase I

## Phase I Beta Tests and First Target Markets

- **The focus on CROs and In-Home Nursing** businesses as the Phase I beta tests and target markets will:
  - Accelerate and lower the cost of HealthPartner's development.
  - Ensure Patient adoption, continued use and improved adherence in controlled settings
  - Utilize low-risk Patient environments with medical professional oversight
  - **Adherence solutions combined markets size estimated over \$3 B for initial target markets**
- **For CRO-run trials:**
  - Cost of drug trials directly impacted by degree of patient adherence
  - Revenue from drug sales will be accelerated by shortening of trials
  - Commonly-used blister pack packaging allows for simplified HealthPartner technology
  - Single trial drug means doses can be pre-programmed allowing for simplified HealthPartner technology
- **For In-Home Nursing use:**
  - Business model supports Patients remaining in homes
  - Immediate cost and liability risk reductions can be achieved even with simplified beta versions
- **Letter of intent** in place for regional in-home nursing provider, with discussions underway with CROs

# HealthPartner's Design Approach is Unique and Critical to its Capabilities

High level design uses three independent, integrated and overlapping components



**HealthPartner Health Hub (“Hub”)**- a low-profile, easy-to-use in-home central base station:

- Enables centralized data gathering and two-way communications with the compact Smart Rings and the Data and Communications Backbone
- Provides many levels of system redundancy and enables system-wide self-checking locally
- Recharges Smart Rings and supports Data/Web Backbone



**Compact Smart Rings (“Rings”)** - proprietary design with full alert and redundancy:

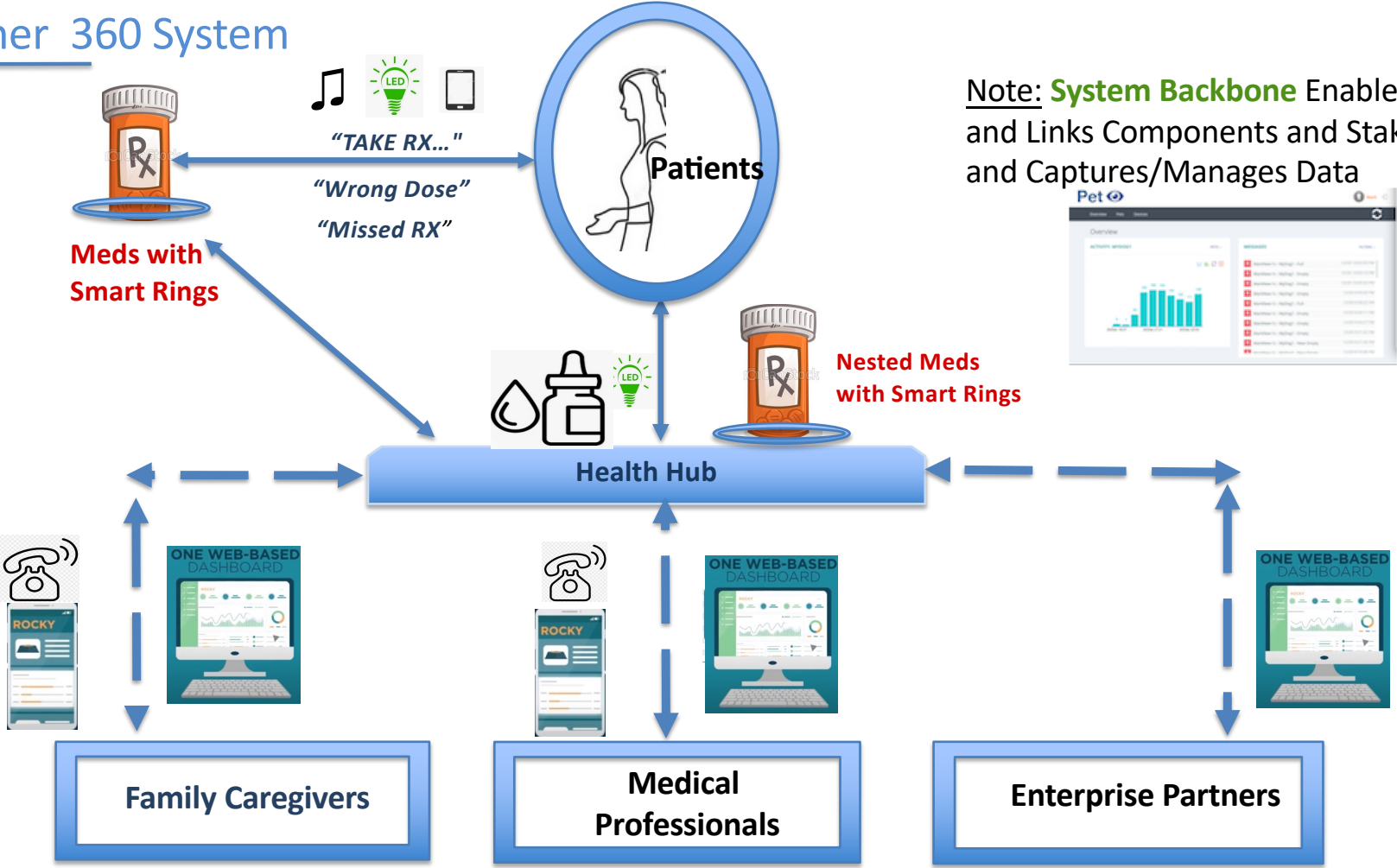
- Compact, reusable, highly-durable devices
- Attaches to all forms of medication packaging
- Ultra-low power design for long battery life – induction charged automatically by the Hub
- Communicate directly with each other for added reliability



**Data and Communications Backbone** is the software that connects hardware, website, and patient and third-party devices:

- Provides the portal and system management for caregivers, telemedicine, etc.
- Provides robust data to Family Caregivers, Medical Professionals and Enterprise Partners

# Simplified Schematic HealthPartner 360 System



Note: **System Backbone** Enables and Links Components and Stakeholders and Captures/Manages Data




Unique Capabilities Enabled by Novel Design and Technologies	Patients	Caregivers	Medical Professionals	Risk Mgmt.
Verifies exact dosage taken for All Medications (pills, drops, injections)	✓	✓	✓	✓
Redundant & Multi-Mode Alerts (audio, visual, vibration)	✓	✓		✓
Real-time Continuous Monitoring with Interventions to Prevent Mistake	✓	✓		✓
Ultra-compact and portable ( extended battery life)	✓			✓
Integrated caregiver communications (e.g., timed/automated messages)	✓	✓		✓
Gathers critical behavioral patient data to assess cognitive abilities		✓	✓	✓
Learns patient activity (e.g., “pill pouring” motion to confirm dispensing)	✓			✓
“Find My Medication” feature	✓			✓
Multi-patient - expandable for-multiple patient households	✓	✓		✓
Reusable Components – lowers-cost	✓	✓		
IDs pharmacy errors	✓			✓
Flexible, open system that learns – no smart phones required	✓	✓	✓	✓
Future communications hub platform for Telemedicine etc.	✓	✓	✓	✓

## Competition

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- HealthPartner's hardware and user interfaces are uniquely designed, but more importantly, the system has many new, critical functional benefits
- HealthPartner 360 is alone in adapting to all forms of medication
- Competitor Products such as PillPack, Smart Bottles and Smart Pills all require custom and separate distribution channels
- Pill dispensers impose error-prone extra human handling, while removing pills from critical safety containers and labeling
- Competitors are exposed to technology failure risk and are less adaptable to technology advancements

## HealthPartner360 Competitive Analysis

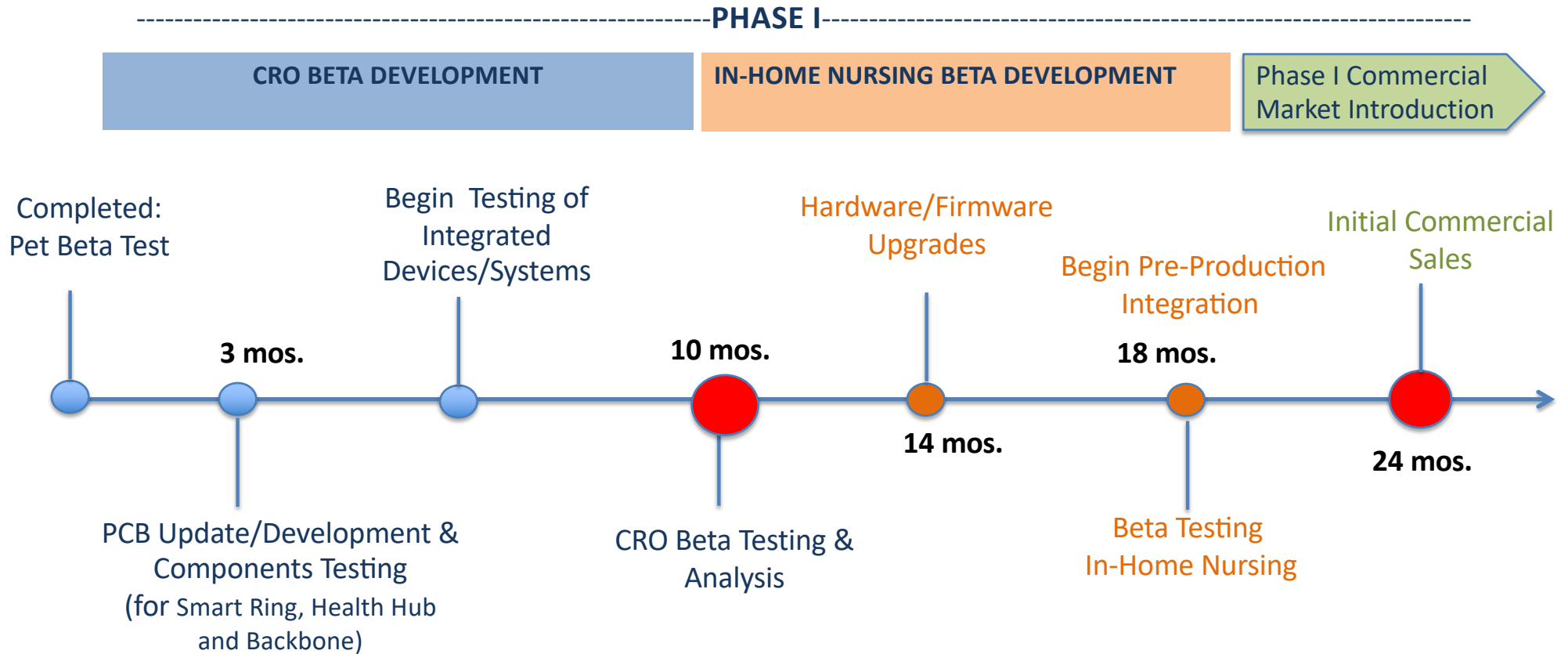
Competitor Categories 	HealthPartner	Smart Bottles & Caps	Smart Pills	Reminder Apps	Pill Dispensing Device	Pill Boxes and Blister Packs	Manual Training/Record Keeping
Features  Selected Competitor Names 		Adheretec Smarxt	Proteus	Medisafe Carezone	Guardian	Generic Sources	Generic Sources
Fully Portable and Operational	✓	✓	✓	✓ No Power		✓ No Power	✓ No Power
Continuous Patient Monitoring and Assessment of Patient Protocol Behavior.	✓	Sporadically	Pills Only		Pills Only		
Automated Active Interventions by the System	✓						
Active Interventions by Caregiver or Medical Professional	✓	✓	✓	✓	Some		
Big Data Capture related to Patient Behavior, Drug Utilization, and Adherence Impact for all Medications	✓			✓			
All Medication Forms (pills, liquids, creams) and Utilization of Standard Medication Packaging	✓						
Hardware and Software Capabilities that can Accommodate in Same Household	✓				With Bracelet		
Full System Redundancies for Hardware in the Home	✓						
Risk Management: Pharmacy Errors, Negative Drug Interactions	✓						
Low cost, reusable hardware	✓			✓	High Cost	✓	✓

## Current Status of Development



- HealthPartner 360 was designed and tested with pets (“Pet Beta”)
  - **Tracked and communicated** on food/water consumption in real time
  - **Custom PCB** and other components
  - **Fully operational web-based data backbone** for near instantaneous report to caregivers
  
- Next stages of development planned to expand functionality and implement components design and upgraded PCB/firmware/software
  
- Proprietary hyper-low power management system design, will greatly increase power efficiency and expand battery life
  
- Provisional patent filed, with utility filing planned within one year to claim priority date



# Phase 1 Timeline



## Revenue Strategy

- Initially a B2B2C Model (“HP360”  “Enterprise Partner”  “Patient”)
- Subscription Model for various levels of HealthPartner Services
- Price for Software Service is based on level of service chosen (\$5 to \$60 per month)
- Hardware Provided (at near cost) to Patients by Enterprise Partners (Target Price < \$90)
- Purchase price may become reimbursable over time
- Revenue growth will accelerate as initial adopters expand use within their organization and the number of stakeholders market segments are expanded
- Ultimately, a Direct-To-Consumer Business Model may evolve

## Contacts:

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